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ENTERED

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/813,279B

DATE: 11/19/2002

TIME: 16:57:57

Input Net : A:\09-813,279 Sequence Listing.txt

Output Set : N:\CRF4\11292002\I813279B.raw

3 <110> APPLICANT: Wood, Keith
4 Hannah, Rita
5 Moravec, Richard A
7 <120> TITLE OF INVENTION: IMPROVED METHOD FOR DETECTION OF ATP
9 <130> FILE REFERENCE: 10743/6
11 <140> CURRENT APPLICATION NUMBER: US 09/813,279B
C--> 12 <141> CURRENT FILING DATE: 2002-11-13
14 <150> PRIOR APPLICATION NUMBER: US60/269,526
15 <151> PRIOR FILING DATE: 2001-02-16
17 <160> NUMBER OF SEQ ID NOS: 8
19 <170> SOFTWARE: PatentIn version 3.1
21 <210> SEQ ID NO: 1
22 <211> LENGTH: 544
23 <212> TYPE: PRT
24 <213> ORGANISM: Artificial Sequence
26 <220> FEATURE:
27 <221> OTHER INFORMATION: Mutant of LucPpe2 luciferase
29 <400> SEQUENCE: 1
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32 1 5 10 15
33 Ala Asp Gly Thr Ala Gly Glu Gln Met Phe Asp Ala Leu Ser Arg Tyr
34 20 25 30
35 Ala Asp Ile Ser Gly Cys Ile Ala Leu Thr Asn Ala His Thr Lys Glu
36 35 40 45
37 Asn Val Leu Tyr Glu Glu Phe Leu Lys Leu Ser Cys Arg Leu Ala Glu
38 50 55 60
39 Ser Phe Lys Lys Tyr Gly Leu Lys Gln Asn Asp Thr Ile Ala Val Cys
40 65 70 75 80
41 Ser Glu Asn Gly Leu Gln Phe Phe Leu Pro Val Ile Ala Ser Leu Tyr
42 85 90 95
43 Leu Gly Ile Ile Ala Ala Pro Val Ser Asp Lys Tyr Ile Glu Arg Glu
44 100 105 110
45 Leu Ile His Ser Leu Gly Ile Val Lys Pro Arg Ile Ile Phe Cys Ser
46 115 120 125
47 Lys Asn Thr Phe Gln Lys Val Leu Asn Val Lys Ser Lys Leu Lys Ser
48 130 135 140
49 Val Glu Thr Ile Ile Ile Leu Asp Leu Asn Glu Asp Leu Gly Gly Tyr
50 145 150 155 160
51 Gln Cys Leu Asn Asn Phe Ile Ser Gln Asn Ser Asp Ser Asn Leu Asp
52 165 170 175
53 Val Lys Lys Phe Lys Pro Tyr Ser Phe Asn Arg Asp Asp Gln Val Ala
54 180 185 190
55 Leu Val Met Phe Ser Ser Gly Thr Thr Gly Val Pro Lys Gly Val Met

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/813,279B

DATE: 11-29-02

TIME: 14:43:17

Input File: A:\09-813,279 Sequence Listing.txt

Output File: N:\CRF4\11292002\I813279B.raw

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80          190          200          210
83 Leu Thr His Lys Asn Ile Val Ala Arg Phe Ser Leu Ala Lys Arg Ile
84          210          215          220
87 Thr Ile Gly Asn Ala Ile Asn Pro Thr Thr Ala Ile Leu Thr Val Ile
88 225          230          235          240
91 Pro Phe His His Gly Phe Gly Met Met Thr Thr Leu Gly Tyr Phe Thr
92          245          250          255
95 Cys Gly Phe Arg Val Val Leu Met His Thr Phe Glu Glu Lys Leu Phe
96          260          265          270
99 Leu Gln Ser Leu Gln Asp Tyr Lys Val Glu Ser Thr Leu Leu Val Pro
100          275          280          285
103 Thr Leu Met Ala Phe Leu Ala Lys Ser Ala Leu Val Glu Lys Tyr Asp
104          290          295          300
107 Leu Ser His Leu Lys Glu Ile Ala Ser Gly Gly Ala Pro Leu Ser Lys
108 305          310          315          320
111 Glu Ile Gly Glu Met Val Lys Lys Arg Phe Lys Leu Asn Phe Val Arg
112          325          330          335
115 Gln Gly Tyr Gly Leu Thr Glu Thr Thr Ser Ala Val Leu Ile Thr Pro
116          340          345          350
119 Lys Gly Asp Ala Arg Pro Gly Ser Thr Gly Lys Ile Val Pro Phe His
120          355          360          365
123 Ala Val Lys Val Val Asp Pro Thr Thr Gly Lys Ile Leu Gly Pro Asn
124          370          375          380
127 Glu Pro Gly Glu Leu Tyr Phe Lys Gly Ala Met Ile Met Lys Gly Tyr
128 385          390          395          400
131 Tyr Asn Asn Glu Glu Ala Thr Lys Ala Ile Ile Asp Asn Asp Gly Trp
132          405          410          415
135 Leu Arg Ser Gly Asp Ile Ala Tyr Tyr Asp Asn Asp Gly His Phe Tyr
136          420          425          430
139 Ile Val Asp Arg Leu Lys Ser Leu Ile Lys Tyr Lys Gly Tyr Gln Val
140          435          440          445
143 Ala Pro Ala Glu Ile Glu Gly Ile Leu Leu Gln His Pro Tyr Ile Val
144          450          455          460
147 Asp Ala Gly Val Thr Gly Ile Pro Asp Glu Ala Ala Gly Glu Leu Pro
148 465          470          475          480
151 Ala Ala Gly Val Val Val Gln Thr Gly Lys Tyr Leu Asn Glu Gln Ile
152          485          490          495
155 Val Gln Asp Phe Val Ser Ser Gln Val Ser Thr Ala Lys Trp Leu Arg
156          500          505          510
159 Gly Gly Val Lys Phe Leu Asp Glu Ile Pro Lys Gly Ser Thr Gly Lys
160          515          520          525
163 Ile Asp Arg Lys Val Leu Arg Gln Met Phe Glu Lys His Thr Asn Gly
164          530          535          540
167 <210> SEQ ID NO: 2
168 <211> LENGTH: 544
169 <212> TYPE: PRT
170 <213> ORGANISM: Artificial Sequence
172 <220> FEATURE:
173 <223> OTHER INFORMATION: Mutant of lucPpe2 luciferase

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RAW SEQUENCE LISTING

PATENT APPLICATION N: US/09/813,279B

DATE: 11/29/02

TIME: 10:51:07

Input File : A:\09-813,279 Sequence Listing.txt

Output File : N:\CRF4\11292002\I813279B.raw

1. SEQUENCE:

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170 Met Ala Asp Lys Asn Ile Leu Tyr Gly Ile Ala Ile Ile Tyr Ile Leu
175 1 1 1 1 1 1 1 1 1 1 1 1
181 Glu Asp Gly Thr Ala Gly Gln Ala Met Ile Asp Ala Leu Ser Arg Tyr
185 1 1 1 1 1 1 1 1 1 1 1 1
186 Ala Asp Ile Ile Gly Cys Ile Ala Leu Thr Asn Ala His Thr Lys Glu
188 1 1 1 1 1 1 1 1 1 1 1 1
189 Asn Val Leu Tyr Glu Glu Phe Leu Lys Leu Ser Cys Arg Leu Ala Glu
190 1 1 1 1 1 1 1 1 1 1 1 1
195 Ser Ile Lys Lys Tyr Gly Leu Lys Ala Asn Asp Thr Ile Ala Val Cys
197 1 1 1 1 1 1 1 1 1 1 1 1
198 Ser Glu Asn Gly Leu Gln Phe Phe Leu Ile Val Ile Ala Ser Leu Tyr
200 1 1 1 1 1 1 1 1 1 1 1 1
201 Leu Gly Ile Ile Val Ala Pro Val Asn Asp Lys Tyr Ile Glu Arg Glu
202 1 1 1 1 1 1 1 1 1 1 1 1
205 Leu Ile His Ser Leu Gly Ile Val Lys Pro Arg Ile Val Phe Cys Ser
206 1 1 1 1 1 1 1 1 1 1 1 1
209 Lys Asn Thr Phe Gln Lys Val Leu Asn Val Lys Ser Lys Leu Lys Ser
210 1 1 1 1 1 1 1 1 1 1 1 1
213 Ile Glu Thr Ile Ile Ile Leu Asp Leu Asn Glu Asp Leu Gly Gly Tyr
214 1 1 1 1 1 1 1 1 1 1 1 1
217 Gln Cys Leu Asn Asn Phe Ile Ser Gln Asn Ser Asp Ser Asn Leu Asp
218 1 1 1 1 1 1 1 1 1 1 1 1
221 Val Lys Lys Phe Lys Pro Tyr Ser Ile Asn Arg Asp Asp Gln Val Ala
222 1 1 1 1 1 1 1 1 1 1 1 1
225 Leu Ile Met Phe Ser Ser Gly Thr Thr Gly Leu Pro Lys Gly Val Met
226 1 1 1 1 1 1 1 1 1 1 1 1
229 Leu Thr His Lys Asn Ile Val Ala Arg Phe Ser Leu Ala Lys Asp Pro
230 1 1 1 1 1 1 1 1 1 1 1 1
233 Thr Phe Gly Asn Ala Ile Asn Ile Thr Thr Ala Ile Leu Thr Val Ile
234 1 1 1 1 1 1 1 1 1 1 1 1
237 Pro Phe His His Gly Phe Gly Met Met Thr Thr Leu Gly Tyr Phe Thr
238 1 1 1 1 1 1 1 1 1 1 1 1
241 Cys Gly Phe Arg Val Val Leu Met His Thr Phe Glu Glu Lys Leu Phe
242 1 1 1 1 1 1 1 1 1 1 1 1
245 Leu Gln Ser Leu Gln Asp Tyr Lys Val Glu Ser Thr Leu Leu Val Pro
246 1 1 1 1 1 1 1 1 1 1 1 1
249 Thr Leu Met Ala Phe Leu Ala Lys Ser Ala Leu Val Glu Lys Tyr Asp
250 1 1 1 1 1 1 1 1 1 1 1 1
253 Leu Ser His Leu Lys Glu Ile Ala Ser Gly Gly Ala Pro Leu Ser Lys
254 1 1 1 1 1 1 1 1 1 1 1 1
257 Glu Ile Gly Glu Met Val Lys Lys Arg Ile Lys Leu Asn Ile Val Arg
258 1 1 1 1 1 1 1 1 1 1 1 1
261 Gln Gly Tyr Gly Leu Thr Glu Thr Thr Ser Ala Val Leu Ile Thr Ile
262 1 1 1 1 1 1 1 1 1 1 1 1
265 Lys Gly Asp Ala Lys Ile Gly Ser Thr Gly Lys Ile Val Ile Ile His
266 1 1 1 1 1 1 1 1 1 1 1 1
269 Ala Val Lys Val Val Asp Pro Thr Thr Gly Lys Ile Leu Gly Pro Asn
270 1 1 1 1 1 1 1 1 1 1 1 1

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RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/813,279B

DATE: 11/29/02

TIME: 10:00:00

Input File : A:\09-813,279 Sequence Listing.txt

Output File : N:\CRF4\11292002\I813279B.raw

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274 385
277 Tyr Asn Asn Glu Glu Ala Thr Lys Ala Ile Ile Asp Asn Asp Gly Trp
278 405 410 415
281 Leu Arg Ser Gly Asp Ile Ala Tyr Tyr Asp Asn Asp Gly His Ile Tyr
282 420 425 430
285 Ile Val Asp Arg Leu Lys Ser Leu Ile Lys Tyr Lys Gly Tyr Gln Val
286 435 440 445
289 Ala Pro Ala Glu Ile Glu Gly Ile Leu Leu Gln His Pro Tyr Ile Val
290 450 455 460
293 Asp Ala Gly Val Thr Gly Ile Pro Asp Glu Ala Ala Gly Glu Leu Pro
294 465 470 475 480
297 Ala Ala Gly Val Val Val Gln Thr Gly Lys Tyr Leu Asn Glu Gln Ile
298 485 490 495
301 Val Gln Asp Tyr Val Ala Ser Gln Val Ser Thr Ala Lys Trp Leu Arg
302 500 505 510
305 Gly Gly Val Lys Phe Leu Asp Glu Ile Pro Lys Gly Ser Thr Gly Lys
306 515 520 525
309 Ile Asp Arg Lys Val Leu Arg Gln Met Phe Glu Lys His Thr Asn Gly
310 530 535 540
313 3210 SEQ ID NO: 3
314 3211 LENGTH: 544
315 3212 TYPE: PRT
316 3213 ORGANISM: Artificial Sequence
318 3220 FEATURE:
319 3230 OTHER INFORMATION: Mutant of LucPpe2 luciferase
321 3400 SEQUENCE: 3
323 Met Ala Asp Lys Asn Ile Leu Tyr Gly Pro Glu Pro Phe Tyr Pro Leu
324 5 10 15
327 Glu Asp Gly Thr Ala Gly Glu Gln Met Phe Asp Ala Leu Ser Arg Tyr
328 20 25 30
331 Ala Asp Ile Pro Gly Cys Ile Ala Leu Thr Asn Ala His Thr Lys Glu
332 35 40 45
335 Asn Val Leu Tyr Glu Glu Phe Leu Lys Leu Ser Cys Arg Leu Ala Glu
336 50 55 60
339 Ser Phe Lys Lys Tyr Gly Leu Lys Gln Asn Asp Thr Ile Ala Val Cys
340 65 70 75 80
343 Ser Glu Asn Ser Leu Gln Phe Phe Leu Pro Val Ile Ala Ser Leu Tyr
344 85 90 95
347 Leu Gly Ile Ile Val Ala Pro Val Asn Asp Lys Tyr Ile Glu Arg Glu
348 100 105 110
351 Leu Ile His Ser Leu Gly Ile Val Lys Pro Arg Ile Val Phe Cys Ser
352 115 120 125
355 Lys Asn Thr Phe Gln Lys Val Leu Asn Val Lys Ser Lys Leu Lys Ser
356 130 135 140
359 Ile Glu Thr Ile Ile Ile Leu Asp Leu Asn Asp Asp Leu Gly Gly Tyr
360 145 150 155 160
363 Gln Cys Leu Asn Asn Phe Ile Ser Gln Asn Ser Asp Ser Asn Leu Asp
364 165 170 175

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RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/813,279B

DATE: 11/29/02

TIME: 10:00:00

Input File : A:\09-813,279 Sequence Listing.txt

Output File: N:\CRF4\11292002\I813279B.raw

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101 Val Lys Lys Ile Lys Pro Tyr Ser Ile Asn Arg Asp Asp Ala Val Ala
106      180      185      190
107 Leu Ile Met Phe Ser Ser Gly Thr Thr Gly Leu Pro Lys Gly Val Met
112      195      200      205
108 Leu Thr His Lys Asn Ile Val Ala Arg Phe Ser Ile Ala Lys Asp Pro
116      210      215      220
109 Thr Phe Gly Asn Ala Ile Asn Pro Thr Ser Ala Ile Leu Thr Val Ile
120 225      230      235      240
110 Pro Ile His His Gly Phe Gly Met Met Thr Thr Leu Gly Tyr Phe Thr
124      245      250      255
111 Cys Gly Phe Arg Val Val Leu Met His Thr Phe Glu Glu Lys Leu Phe
128      260      265      270
112 Leu Gln Ser Leu Gln Asp Tyr Lys Val Glu Ser Thr Leu Leu Val Pro
132      275      280      285
113 Thr Leu Met Ala Phe Leu Ala Lys Ser Ala Leu Val Glu Lys Tyr Asp
136      290      295      300
114 Leu Ser His Leu Lys Glu Ile Ala Ser Gly Gly Ala Pro Leu Ser Lys
140 305      310      315      320
115 Glu Ile Gly Glu Met Val Lys Lys Arg Phe Lys Leu Asn Phe Val Arg
144      325      330      335
116 Gln Gly Tyr Gly Leu Thr Glu Thr Thr Ser Ala Val Leu Ile Thr Pro
148      340      345      350
117 Lys Gly Asp Ala Lys Pro Gly Ser Thr Gly Lys Ile Val Pro Phe His
152      355      360      365
118 Ala Val Lys Val Val Asp Pro Thr Thr Gly Lys Ile Leu Gly Pro Asn
156      370      375      380
119 Glu Pro Gly Glu Leu Tyr Phe Lys Gly Pro Met Ile Met Lys Gly Tyr
160 385      390      395      400
120 Tyr Asn Asn Glu Glu Ala Thr Lys Ala Ile Ile Asp Asn Asp Gly Trp
164      405      410      415
121 Leu Arg Ser Gly Asp Ile Ala Tyr Tyr Asp Asn Asp Gly His Phe Tyr
168      420      425      430
122 Ile Val Asp Arg Leu Lys Ser Leu Ile Lys Tyr Lys Gly Tyr Gln Val
172      435      440      445
123 Ala Pro Ala Glu Ile Glu Gly Ile Leu Leu Gln His Pro Tyr Ile Val
176      450      455      460
124 Asp Ala Gly Val Thr Gly Ile Pro Asp Glu Ala Ala Gly Glu Leu Pro
180 465      470      475      480
125 Ala Ala Gly Val Val Gln Thr Gly Lys Tyr Leu Asn Glu Gln Ile
184      485      490      495
126 Val Gln Asp Tyr Val Ala Ser Gln Val Ser Thr Ala Lys Trp Leu Arg
188      500      505      510
127 Gly Gly Val Ile Phe Leu Asp Glu Ile Pro Lys Gly Ser Thr Gly Lys
192      515      520      525
128 Ile Asp Arg Lys Val Leu Arg Gln Met Leu Glu Lys His Thr Asn Gly
196      530      535      540
459 <210> SEQ ID NO: 4
460 <211> LENGTH: 544
461 <212> TYPE: PRT

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VERIFICATION SUMMARY

PATENT APPLICATION N: US/09/813,279B

DATE: 11/29/02

TIME: 10:00:00

Input File : A:\09-813,279 Sequence Listing.txt

Output File : N:\CRF4\11292002\I813279B.raw

1.1.1. Status : Current Filing Date: 11/29/02, Required Current Filing Date: